

## REMARKS

This paper is responsive to an Examiner's Comment mailed June 21, 2004. Prior to this amendment, claims 1-16 were withdrawn, and claims 17-36 were pending. After canceling claims 1-16, and adding claims 37-48, claims 17-48 remain pending.

In Section 1 of the Examiner's Comment, it states that either the withdrawn claims must be cancelled, or that payment be made for the newly added claims. In response, claims 1-16 have been cancelled. The Applicant paid for 32 claims when the application was initially filed. Since claims 37 through 48 have been added by this amendment, there are now 32 claims pending in the application, the same as initially paid for by the Applicant. Therefore, no additional payment should be necessary. However, in the event the Applicant has miscalculated, the Examiner is authorized to debit account 502033.

The Applicant thanks the Examiner for the courtesy of the telephone communication of Monday, June 28<sup>th</sup>, 2004, where the Examiner explained the rationale for canceling the withdrawn claims. In that conversation the Examiner expressed concern that the claims may not be allowable, because the Applicant did not take, verbatim, every suggestion made by the Examiner with respect to the 35 U.S.C. 112 rejections, of the Office Action of April 8, 2004.

With respect to claim 17, the Examiner suggested changing the claim as follows:

“a multi-threshold decision circuit having an input to accept a non-return to zero (NRZ) data stream, an input to accept threshold values, and outputs to provide bit estimates based on non-causal bit value comparisons responsive to a plurality of voltage threshold levels;”

The Applicant was unable to incorporate this suggestion, as the multi-threshold decision circuit does not provide outputs based upon non-causal

analysis. The multi-threshold circuit is, in one embodiment, a set of parallel threshold comparator circuits that compare input voltages, to threshold voltage levels, see Fig. 3. Rather, it is the “non-causal circuit” that supplies an output based upon “non-causal bit value comparisons”. “(T)he non-causal bit value comparisons” refer to “comparing a current bit estimate to bit value decisions made across a plurality of clock cycles”. For this reason, the Applicant respectfully submits that there is no antecedent basis problem with this claim. MPEP 2173.05(e) states that inherent components of a recited element have antecedent basis. Alternately, the use of the word “the” in the phrase “the non-causal bit value comparisons” does not render the claim indefinite, as there are no other non-causal comparisons being made (i.e., in other circuits), with which this process could be confused. However, the Applicant is willing to amend the claim as presented, to – the non-causal bit value comparisons—, if this amendment will advance the claims to issue. Alternately, the Applicant would be willing to amend the claim to delete the phrase (the non-causal bit value comparisons) entirely, as it is essentially a restatement of the phrase “comparing a current bit estimate to bit value decisions made across a plurality of clock cycles”.

With respect to claim 18, the Examiner suggested changing “the current, first bit, estimate” to --a current, first bit, estimate--. In response, the Applicant changed “the” to –a— as suggested by the Examiner. Additionally, the word “current” was deleted, as the claim seems to be just as clear without the use of this extra word. However, the Applicant is not opposed to adding the word back again, if the Examiner wishes.

Also with respect to claim 18, the Applicant changed “the first bit value” to –a first bit value--, exactly as suggested by the Examiner.

With respect to claim 22, the Applicant amended the claim exactly as suggested by the Examiner..

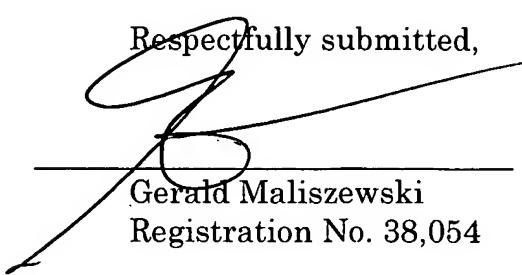
With respect to claims 23-25, the Applicant changed “the first bit values” to –the first bit value--, as suggested by the Examiner. However, there is antecedent basis for the phrase “the stream of corrected data bits” (from claim 22). For improved clarity, the claims were amended to add that “the stream of corrected data bits” is from --the FEC circuit--. The Applicant is willing to remove this added phrase (--the FEC circuit--) if the Examiner wishes.

It is believed that this application is now in a condition of  
allowance.

Date:

6/29/04

Respectfully submitted,

  
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